— Phaeton's Legacy — When The Earth Nearly Died

Mounting geological evidence proves that sudden, cataclysmic transformation — rather than slow, gradual change has been responsible for shaping our planet.

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CHALLENGING THE ICE AGE THEORY

hen asked what they understand by the term "ice age", most people seemingly believe that it was an era when continuous ice-sheets blanketed Arctic regions well into what now are temperate climes—as far south as approximately 50°N in Europe and 36°N in North America. The resultant bleak landscape is often imagined (especially by artists) as having been inhabited by such animals as the hairy mammoth, woolly rhinoceros and musk-ox, hunted by our fur-clad ancestors.

The origin of such beliefs lies in the placement by geologists of such an ice age in the Pleistocene epoch, which abundant evidence indicates came to an end about 11,000 years ago when our own era, the Holocene, began. The Ice Age itself is said to have persisted for about a million years, during which ice-sheets repeatedly waxed and waned. Coincidentally, ice-sheets similar to those smothering Arctic latitudes also allegedly covered the south polar regions.

Directly associated with the notion of an ice age, and indeed largely responsible for its inception, were a number of singular geological phenomena which, because they sometimes occurred together, apparently shared a common genesis. Included were striated rock surfaces, erratic boulders and immense accumulations of frequently intractable 'drift' deposits. The geographical settings and locations of these features were also peculiar. The striations, which often occurred in groups, nearly always shared a single orientation which commonly ignored obviously pre-existing topography-and the erratic boulders, which in some localities are very numerous, lie at all kinds of altitudes despite their often stupendous size and tonnage. Examples are known almost a quarter of a mile (400 m) long! All occur at great distances from the nearest natural outcrops of the particular strata composing them. The 'drift' deposits sometimes occur on northern hill-slopes only, or on mountain peaks but not in adjacent vallcys, and, frequently, mantle chronically pulverised underlying bedrock. Generally unstratified and often contorted, the 'drift' deposits in many places also contain abundant remains of huge trees, plants and leaves often foreign to the latitudes in which these are discovered, and countless teeth and bones of the mammoth and its contemporaries. Wood-splinterings and bone fractures are often sharp and fresh-looking. They clearly happened geologically very recently.

This impression generally afforded by all this evidence is one of overwhelming force operating indiscriminately, suddenly, violently and on a colossal scale.

Conventional ice age concepts—first mooted about 150 years ago—ascribe all such phenomena to remorseless, slow-acting, glacial agencies active for hundreds of thousands of years, but which, as shown by much recent research, ended with surprising abruptness at the end of Pleistocene times. Yet, while the end of such conditions is now clearly traceable, the origin of the Ice Age, despite numerous diverse theories devised to account for it, remains obscure.

It has, furthermore, been established that many northern areas formerly believed to have been overridden by these Pleistocenc ice-sheets, themselves conceived of as thousands of feet thick, were never glaciated at all. Such details, allied to the discoverics of frozen remains of upright dead trees in Arctic latitudes presently incapable climatically of supporting such trees (which could never have survived the deep refrigeration of such massive glaciation there) and of the occurrence of striated rock surfaces and erratic boulders as far south as equatorial latitudes (regarded as always having been ice-free by even the most ardent glacialists), cast serious doubt on the reality of an ice age like that postulated by orthodoxy. The results of special studies of current ice actions and characteristics also support such doubts, and generally indicate that various theoretical actions long attributed to Pleistocene ice-sheets either never occurred or were at best exceedingly limited. Certainly, ice did not operate on the hemispheric scale implied by the known geological phenomena.

Irrespective of those phenomena's significance, however, sci-

ence has shown that it developed during a time of other tremendous Earth disturbances. These included massive crustal fissuring, both above and below sea-level; the uplift (often violent) of many of the Earth's greatest mountain ranges to their present elevations; widespread seismic and volcanic eruptions causing acute atmospheric pollution; extensive crustal subsidence elsewhere; and the emptying and displacement of seas and lakes and the destruction of older drainage systems.

Worldwide evidence of bonepacked caves and rock-fissures, fre-

quently containing contemporary but faunistically and climatically incompatible creatures, not only emphasises the catastrophic nature of these events, but also strongly indicates an alteration then to the tilt of the Earth's axis.

Curiously, although reliably dated as generally of very late Pleistocene age, these dramatic changes are seldom linked in the popular view with the ice age concept, for to do so unites conflict-

We have previously noted that the Moon appears to have formerly circled Earth more closely than it does today—probably at no very remote time either. Fig. Ia shows the Moon moving along this nearer orbit round an Earth spinning from west to east on a nearly vertical axis. Phaeton and the smaller Kingu (Tiamat's moon) approach the Earth/Moon system from the direction of Mars on their disruptive journey. For the sake of clarity, the minor but still dangerous lesser objects accompanying Phaeton and Kingu are omitted from this and the following diagrams.

Special note should also be taken of the Roche zone shown enveloping Earth. In due course, we shall see how the zone played a very important part towards the later stages of the Phaeton disaster.

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ing images of, on the one hand, a slow-acting theoretical agency ice—operating primarily in polar and sub-polar latitudes, with, on the other hand, highly disruptive sudden activities exhibiting welldocumented global ramifications. In unmistakably reflecting catastrophic conditions, the scale and extent of the latter demand identification of a suitable underlying cause which initiated all such effects.

> It is noteworthy that an unexpectedly large number of Earth scientists have repeatedly concluded that, as Earth is apparently incapable of producing such fundamental disturbances of its own volition, those of late Pleistocene times must, *a priori*, have been occasioned by a powerful force acting upon the globe externally. An independent cosmic agency is required.

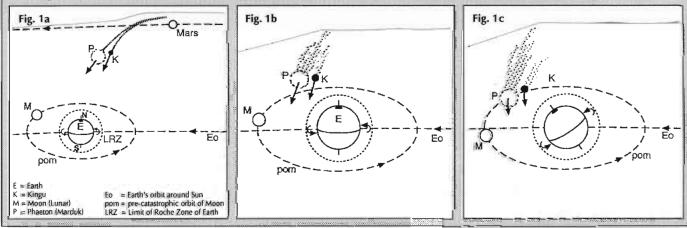
> Others have explored this idea before, but never completely successfully. Errant comets, asteroids and giant meteors have been amongst the candidates proposed. Recent NASA

space explorations and other astronomical discoveries reveal that none of these bodies possesses sufficient power to engender such widespread terrestrial disruption. This is a fact ably demonstrated in our book, When the Earth Nearly Died, wherein the culprit is identified as having almost certainly been a dangerous, highlycharged fragment of an astronomically close supernova explosion around 17,000 years ago. Evidence exists for just such an explo-

Fig 1b, which represents a temporal interval of several days, shows a still largely unchanged Earth circled by the Moon on its pre-catastrophic orbit, but with Phaeton and Kingu now nearing Earth as they attempt to fly past the Earth/Moon system on their sunward journey. Electromagnetic exchanges between all these bodies would have steadily increased from this point, resulting in an electrically enhanced terrestrial atmosphere, an intensification of magnetic storms, and a general rise in the temperatures of both Earth's atmosphere and hydrosphere.

As Ĥindu traditions correctly affirm, Phaeton was "a dreadful spectacle". Multifarious changes could, of course, be expected in an object like Phaeton. Traditional references to them, far from being fanciful, are almost certainly genuine if poetic accounts of what was actually seen. The following conjectural interpretations (Figs. 1c and 1d) graphically outline what may have been observed in Earth's skies then.

Fig. 1c, which represents the probable situation after a further interval of a day or two, shows Phaeton and Kingu set on a path that will take them inside the Moon's orbit and to one side of the Earth's northern zenith. To Earthbound observers their course was running contrary to Earth's rotation—as specifically mentioned in Ovid's account of the disaster. Earth/Moon gravitation now begins to affect the course of the intruders, while Earth, tilting axially from the vertical, starts to align itself towards Phaeton and Kingu.



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sion having occurred near our solar system at a date which, allowing for an appropriate time-lapse as the fragment hurtled through space towards the Sun's family, accommodates the aforementioned Earthly upheavals. A non-dispersed cloud of Aluminium-22 (typical residue of stellar explosions) has also been traced in space astronomically close to the solar system, and in geological terms it is very young indeed.

Ancient traditions worldwide tell of a traumatic battle long ago between Earth and a terrible cosmic visitor which, remembered by various names, allegedly terminated an earlier Golden Age and set Earth alight before extinguishing the fires by a vast flood. Religious texts call the latter "Noah's Deluge". "Phaeton", one of the classical Greek names given this fiery celestial intruder, ideally epitomises this sequence of disastrous events.

Early Mesopotamian epics have survived which record this conflict not merely in relation to Earth but

also to other planets in the solar system. "Marduk" was one of their names for this marauding body, which they expressly state arrived from the depths of space before being drawn towards the Sun by the latter's enormous gravitational pull. Marduk's sunwards journey took it past or near many of the planets and their satellites, including the Earth/Moon system. These epics describe Marduk's progress in considerable detail. It was both disruptive

Terrestrial wobble and axial shift will also have been exacerbated by the alarmingly fast increase in seismic activity occasioned by the steadily nearing Phaeton.

Fig. 1d indicates the probable position after a similar interval of time. The Moon is shown still moving along its pre-catastrophic orbit as Earth's rotation either ceases or is severely retarded by Phaeton and its attendants—now even closer to Earth. At this point, the combined gravitational pull of Earth and the Moon apparently began to prize Kingu away from Phaeton's embrace and drag it inexorably towards Earth's Roche zone and ultimate destruction. Colossal electromagnetic exchanges must have continued unabated between Phaeton, Kingu, Earth and the Moon during this phase of the drama, as each object sought to stabilise its own elec-

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tromagnetic potential. The combined separation of Kingu from Phaeton and the stopping or slowing of Earth's axial spin caused terrible havoc on Earth. The waters of the world's rivers, lakes and oceans were drained from their original basins and drawn gravitationally to the point on Earth nearest (opposite) Kingu and Phaeton. Worldwide traditions remember this awesome effect.

Proceeding now to Fig. 1e, which represents a few hours later, we find Phaeton unable to break the combined Earth/Moon gravitational field and so unable to 'capture' the Moon, displacing it to a new (its present) orbit. Fragments of Kingu plunged earthwards.

As Phaeton's influence began to wane,

and destructive. If various strands of evidence are genuine, then it actually disintegrated one planet, Tiamat, said to have formerly orbited beyond Mars. Ancient Babylonian baked clay tablets depicting the solar system regularly show one planet too many, while ancient Greek traditions speak of the lost planet Electra.

A survey of known planetary anomalies and aberrant satellite movements, the singular behaviour and orbits of many asteroids,

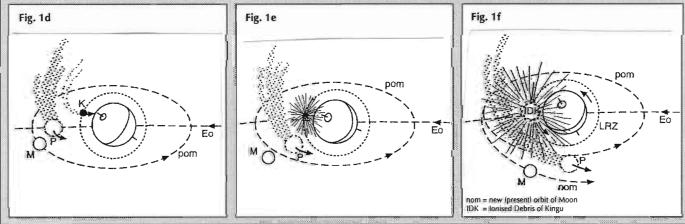
meteor-swarms and short-term comets within the solar system strongly suggests that comparatively very recently something has rampaged through the Sun's family and left widespread mayhem in its wake. Indeed, the modern astronomical and ancient traditional records of such things appear to be in remarkably close agreement. Moreover, the havoc wrought on Earth (as discernible from the planet's natural history) was essentially very like that sustained by Mars (according to Mesopotamian accounts). Such similarities are too pronounced to be wholly fortuitous.

All these and innumerable other aspects of this great saga, its approximate date of occurrence and the long-term effects it has left in its train are explored in depth in *When the Earth Nearly Died.* Copiously referenced throughout, this interdisciplinary study also points out that one of the keys to the whole scenario is scale. What is catastrophic on Earth is much less so in terms of the scale of the solar system, and virtually unimportant and indeed

> Earth's rotational speed started to increase again, although the planet generally still continued to suffer the calamities outlined in our explanation of Fig. 1d.

> Fig. 1f depicts the final phase of this terrible confrontation. The Moon is shown setting out on its new orbit. Earth has received Phaeton's legacy of an altered axial tilt and obscuring 'collapsed sky' conditions worldwide. Numerous fragments of the disintegrated Kingu continue to bombard Earth as, concurrently, another of Phaeton's legacies—the Deluge—wreaks further havoc.

> With the destruction of Kingu and the sunwards departure of Phaeton, the deranged atmosphere and the gravitationally heaped-up terrestrial waters strove to regain normality.



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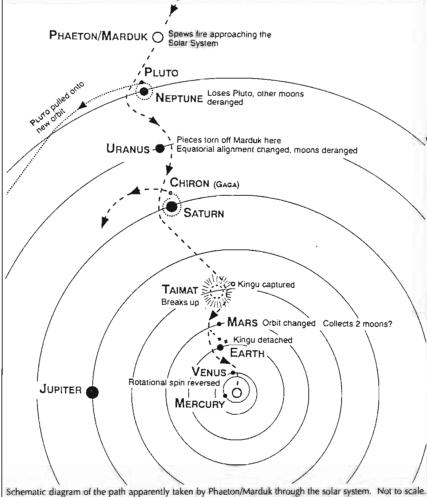
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commonplace, at a stellar level. Astronomically speaking, novas and supernovas are not actually rare events. On that basis it would simply be a matter of time before such an event occurred which affected the solar system, Earth included, but perhaps a very long time before one erupted close enough to cause measurable inconvenience to terrestrial life.

SURVIVAL OF THE FITTEST, OR THE LUCKIEST?

From an evolutionary viewpoint such events could be highly significant. Upon their eruption, the survival of the luckiest would replace the Darwinian norm of the fittest. Interestingly, the last known event possibly in this category, preceding the visit of Phaeton, seems to have been that which ended the reign of the dinosaurs some 65 million years ago. Punctuated and uniformitarian evolution may thus actually go hand in hand.

Inevitably, the 'lucky' survivors of this dire event represented a varied cross-section of pre-Phaetonic plant, animal and human life. Numerically impoverished and widely scattered, either as lone individuals, traumatised couples or heterogeneous groups, the human survivors had, according to many remarkable traditions and ancient histories, escaped destruction by taking refuge on high peaks (later called "mounts of salvation") or in caves (the entrances of some of which were sealed up), or had saved themselves in arks (several were allegedly built), on rafts, uprooted trees, logs or even on huge floating balls of gum or resin. Significantly, several discoveries of large ancient ships buried at



Schematic diagram of the path apparently taken by Phaeton/Marduk through the solar system. Not to scale Based on Sumerian texts and recent astronomical data, and on the main effects attributable to its passage.

great depths under gravel or even fire-formed rocks are noted.

Sobering accounts exist of how hilltop survivors, accompanied by numerous animals which had shared their refuges, slowly descended to lower ground following the ebbing away of the Deluge waters, while phenomenal winds dried out those surfaces. Similar are those accounts which relate how cave survivors, again often entombed with various animals, dug themselves out before emerging into what had become a thoroughly unfamiliar world, and were obliged to contemplate a new beginning.

Other traditions mention how lone individuals at first believed themselves to be the sole survivors of this appalling catastrophe and how they wandered and blundered about, often in the gloom and choking smoke engendered by erupting volcanoes, only occasionally glimpsing a similarly-disoriented bird or animal hurrying in some other direction as they skirted the evidence of devastation and death on all sides. Descriptions are also to hand of small bands of survivors wading for days through shallows and across mud-flats in order to reach higher, friendlier terrain visible at some greater distance. Such terrain was perhaps identifiable as 'friendlier' through clearly supporting human and animal survivors, or still-erect trees or vegetation. Several traditions specifically mention such refugia, and how the tremendous fires and floods generated by Phaeton's visit had not swept uniformly across the heaving globe. Tradition, of course, has no cause to invent such details unless the described scenarios had once actually occurred.

> Although intrinsically no more than intriguing adjuncts to the traceable physical aftermath effects of this cataclysm, the consistent signal received from these ancient recollections-especially their graphic descriptions of conditions which could only accumulate during a world disaster of this magnitude-goes far towards underscoring the basic validity of the accounts as a whole, and that, despite the ridicule so often unwarrantedly heaped upon them in certain quarters, they constitute precious documents of what was once awful reality. That so many racial, tribal and national 'histories' the world over begin by claiming that all later generations descended directly from Deluge-surviving single pairs or cave groups cannot be entirely coincidental. Incomplete and spotty, they are irreplaceable records of transient things and experiences that could, by their very nature, never be permanently etched into Earth's great stone book, the geological record.

> Life as we know it had literally to begin again. It would have to propagate and multiply, and Man, the most industrious of Nature's terrestrial creations, would have to seek out the most favourable habitats and locate and harvest the most immediately accessible resources. These endeavours would occupy centuries and would be irregularly governed (and sometimes blighted) by the often harsh and unpredictable meteorological fluctuations that seriously affected much of the Earth during aftermath times. Steadily less severe as the Holocene has unfolded, these are to a considerable extent nevertheless still with us. Yet, given the scale and ferocity of Phaeton's onslaught, it is indeed fortunate that these are not, even more than 11,000 years later, more acute than they now are.